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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re: Application of D. Swistak et al.

Date: December 18, 2006

Serial No. 10/677,772

Examiner: T. Mayo

Filed: 10/1/03

Art Group: 3671

For: Leaching Chamber with Inward Flaring
Sidewall Perforations

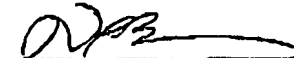
Atty Docket No. 2313

DECLARATION

1. I, Ronald Brochu, am declarant for a declaration dated September 22, 2006. I make this further declaration in support of the above referenced application.
2. I am familiar with the design and manufacturing method for the Infiltrator Systems Maximizer storm water chamber. Fig. 1 is a side elevation view of a portion of a Maximizer chamber planar wall. Fig. 2 is a cross section through the chamber wall. Fig 3 is a vertical cross section analogous to Fig. 2. Fig. 3 shows the associated female core and male cavity parts of the injection mold, in spaced apart condition, as when the mold has opened. The chamber which has been just formed is shown in phantom, as it rests on the core. Fig. 3 shows how the boss part of the mold, also called bypass shutoff, forms a typical hole.
3. The holes in the chamber have an inward and tear-drop shape flaring region V, as shown in Fig. 1 and Fig. 2. The flaring was a byproduct of how the mold had to be shaped, in order to make the holes without using costly movable slides. The core part of the mold had raised fixed portions, called bosses here. Each boss had to have a long downward flare portion V' to avoid an undercut which would cause problems in lifting the just-molded chamber from the core, i.e., vertically in Fig. 3. The Maximizer chamber has a upwardly sloping basic axis as shown.
4. The foregoing mold-boss technique is not suitable for making a leaching chamber of the type shown in Nichols et al. Pat. No. 4,759,661. If the technique was used to make slots in such a Nichols type of chamber, the slots would have an undesirable down-slopped bottom edge, corresponding to region V in Fig. 2. As a result, soil placed against the sidewall would fall into the opening and into the chamber. (Put another way, the resultant Soil Threshold Angle STA would not be useful. See section 6, below.)
5. In Section 5 of my September 2006 declaration, I described how the use of inward pulling slides, with resultant inward flared slots, provided multiple surprising benefits to applicants' leaching chamber. There is no analogous benefit of inward flaring for the Maximizer chamber; and there is no consequential effect on performance of the chamber in its intended use.
6. The Soil Threshold Angle (STA) of Maximizer chamber holes is about minus 90 degrees, as shown in Fig. 2. That STA is far in excess of the Angle of Repose of any typical sandy or

granular soil. Note that the lower edge of the typical hole H is a knife edge. The poor STA and lack of any flat at the lower edge of the hole would allow ordinary soil which was placed against the chamber sidewall to pour into the chamber.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.



Ronald Brochu

12-18-06

Date

